

Goal 1

A seamless, integrated system of postsecondary education strategically planned and adequately funded to enhance economic development and quality of life.

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The Council tracked systemwide progress on a number of indicators in 2003-04 and implemented statewide initiatives relative to the objectives of Goal 1. Activities will be implemented in 2004-05 to address concerns and sustain momentum.

A Seamless, Integrated System

A seamless educational system is one in which students move easily from one educational sector and level to the next. In Kentucky, too many students are lost at key transition points in the education pipeline. Students need to be better prepared for college and the workplace, and Kentucky's educational system needs to be well coordinated so that students learn what they need to know to succeed at the next level. The following indicators reflect progress in accomplishing this goal:

Indicators Related to Seamlessness

- Thirty-seven percent of ninth-graders in Kentucky enrolled in college within four years in 1998, and 38 percent in 2002. Kentucky met its goal to improve on this indicator.
- Twenty percent of 2001 GED graduates enrolled in a Kentucky college or university within two years. The goal was 19.4 percent.
- A student's score on the ACT college entrance examination is a solid indicator of readiness for college work. After holding steady or declining for several years, the average ACT score for Kentucky's high school graduates has risen the last two years to 20.3 in 2004, up from 20.0 in 2002. The national average increased a tenth of a percentage point to 20.9 in 2004. This is significant because the conventional expectation is for

scores to decline as participation broadens to include less-prepared students.

- National studies show that students who complete a rigorous high school curriculum like the ACT core are more successful in college. The percentage of Kentucky test-takers who indicated they were taking the ACT core curriculum increased between 2002 and 2003, from 58 percent to 59 percent.
- In 2000-01, for every 1,000 high school juniors and seniors in Kentucky, 124.8 students enrolled in college-level work. This number rose to 219.5 students in 2001-02 and 377 in 2002-03. The bulk of the increase came from dual enrollment, especially at the community and technical colleges. In 2000-01, 4,554 high school students were enrolled in a public postsecondary institution; that number more than doubled in 2001-02 to 11,040. In 2003-04, the number reached 20,158.
- Encouraging more community and technical college students to transfer to a baccalaureate program is essential if the state hopes to reach the national average in the percentage of adults with a bachelor's degree. The number of students transferring from the KCTCS and Lexington Community College to a Kentucky public or independent four-year institution in 2003 rose to 2,951, an increase of 2.6 percent. However, the number of community and technical college transfers remains below 1998 levels. The Council is working with the institutions to increase the number of transfers and to establish aggressive new transfer goals.

Initiatives to Enhance Seamlessness

Improvements in the seamlessness and integration of Kentucky's educational systems are due in part to the postsecondary system's cooperation with early childhood education providers, P-12, and adult education partners to improve students' preparation for college. The following initiatives illustrate the quality of collaborative efforts that occurred in 2003-04, and what is planned to improve the system further.

State P-16 Council

The state P-16 Council was created in 1999 to advise the Kentucky Board of Education and the Council on Postsecondary Education on the preparation and professional development of teachers, the alignment of competency standards, and the elimination of barriers that impede successful transitions from

preschool through college. Early childhood education, P-12, adult education, and postsecondary education are key participants.

In 2002-03, the state P-16 Council participated in several initiatives to facilitate student progress from early childhood education through baccalaureate attainment. The most significant of these were the American Diploma Project (ADP), the implementation of Senate Bill 74 of the 2002 General Assembly (advanced placement and dual credit), and the Kentucky Early Mathematics Testing Program (KEMTP). Moreover, new local P-16 councils were formed throughout the state to ensure policy initiatives are carried out in local districts.

In February 2004, the American Diploma Project released benchmarks of college- and workplace-readiness in mathematics and English, with workplace tasks and postsecondary assignments illustrating these benchmarks. The Council on Postsecondary Education charged postsecondary institutions to develop a statewide postsecondary placement policy using these nationally researched standards of college-readiness, and Kentucky Adult Education began revising its curriculum to prepare adult learners for postsecondary education and skilled employment. Local councils used the ADP benchmarks to focus alignment discussions among high school teachers and college faculty, and the Northern Kentucky Council of Partners worked with high school English and mathematics teachers and postsecondary faculty to identify the gaps between the standards of the Programs of Studies, the Core Content for Assessment, the postsecondary expectations of the ACT and the postsecondary and workplace expectations of ADP benchmarks. They are developing instructional materials to help teachers meet postsecondary and workplace expectations as well as Kentucky accountability standards.

Throughout the year, the state P-16 Council examined ways to use data as a basis for making policy changes to increase student achievement and college success and to decrease achievement gaps at every level. Kati Haycock, from The Education Trust, and Jo Dell Brasel, from ACT, Inc., were among its guest presenters who used both national and Kentucky data to make the case for a more challenging high school learning experience for all students. The Kentucky Department of Education began its Restructuring High School Initiative and agreed to provide the data analysis for the Council on Postsecondary Education's High School Feedback Report.

The P-16 Council approved a vision and mission statement and began developing performance indicators reflecting both the agenda of its partner agencies and addressing the "seams" between early child care and education, P-12, adult education, postsecondary education, and the skilled workplace. In June 2004, the state P-16 Council elected to expand its membership to include

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a broader representation of education and workforce development stakeholders: the Secretary of the Education Cabinet (non-voting), the Commissioner of Technical Education, the Commissioner of Workforce Investment, the CPE Vice President for Adult Education, a business representative and a labor representative (to be designated by the Kentucky Workforce Investment Board), a representative of the local P-16 councils, and the Executive Director of the Kentucky Higher Education Assistance Authority.

Local P-16 councils will continue to receive funding and support from the Council for their ongoing, grassroots work to improve education in the commonwealth's communities.

Advanced Placement

Senate Bill 74 of the 2002 General Assembly directed the Council to develop an administrative regulation by December 31, 2002, that would standardize the college credit awarded for a score of at least "3" on any one of the College Board's advanced placement (AP) examinations. The Act also required the Council to publish, in print and electronic form, the AP scores necessary for credit in specific academic programs at Kentucky public and independent institutions.

The regulation is in place, and the Council staff compiled the AP score information in print form. It is in the process of publishing this information on the Web. The Council staff is working with the Kentucky Department of Education (KDE) to examine ways to increase AP offerings through the Kentucky Virtual High School.

Dual Enrollment/Credit

Senate Bill 74 also requires school councils to make available a core curriculum or advanced placement, international baccalaureate, dual credit, or dual enrollment. The Council staff is working with the Kentucky Department of Education to increase access to dual credit courses through the Kentucky Virtual High School. The Kentucky Higher Education Assistance Authority (KHEAA) has created a scholarship fund to support high school students taking dual credit courses through the Kentucky Virtual High School.

The number of Kentucky high school juniors and seniors taking college-level courses is one indicator of their preparedness for postsecondary education. In addition to advanced placement (AP) courses, the Council encourages

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dual enrollment as a way to increase college awareness and aspiration among high school students. Presently, many such dual enrollment opportunities exist throughout the state; in particular, arrangements between KCTCS and area high schools have increased sharply.

Nevertheless, continued impediments to dual enrollment and dual credit include feared loss of annual daily attendance on the part of local school districts, as well as lack of tuition compensation for the postsecondary institutions (unless paid by the student). The Council is working with KDE, the KCTCS, and the four-year institutions to develop a coherent, consistent statewide policy for dual credit. The Council is implementing a study to assess the impact of dual enrollment on Kentucky's high school graduation, college going, persistence, and graduation rates.

Kentucky Early Mathematics Testing Program

The Council provides funding to support the Kentucky Early Mathematics Testing Program (created by SB 77 of the 2000 General Assembly). Administered by Northern Kentucky University with online capacity through the University of Kentucky, the program assesses the degree to which high school sophomores and juniors are prepared for college-level mathematics. By taking the KEMTP, students can identify and rectify weaknesses early enough to avoid developmental courses in college. A 2003 study conducted by the UK College of Mathematics showed a strong correlation between performance on KEMTP and final grades in elementary calculus and college algebra.

KEMTP is receiving national attention. The University of Oklahoma developed an online test modeled after KEMTP, and Eastern Washington University is creating a testing program that students will access through the KEMTP website. Several high schools in Tennessee have administered the test to their students. The online assessment capacity that UK developed for KEMTP contributed to its receiving \$22 million from the National Science Foundation for the Appalachian Math and Science Initiative to provide professional development for mathematics and science teachers in Appalachian counties in Kentucky, Tennessee, and West Virginia.

The KEMTP website was completely redesigned in 2001, and a traditional paper-and-pencil version was added in 2003. This method proved especially attractive to teachers as an in-class instructional device. Growing enrollment in the program reflects its popularity and usefulness. Program directors are working with statewide programs such as GEAR UP Kentucky to expand its use in low-income schools. The following chart shows the growth in student and high school participation since 2000-2001.

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	2000-01	2001-02	2002-03	2003-04	4 year increase
Students	3010	8173	8496	9380	212%
High Schools	29	72	70	72	148%

Statewide Transfer Initiatives

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The Council's Statewide Transfer Committee was formed in November 2003. Comprising representatives from each public and some independent institutions, the committee has taken the lead in improving the existing transfer agreements; developing more flexible, student-oriented transfer frameworks; and implementing a standardized process for certifying and accepting transfer student coursework. The committee revised the 1996 General Education Transfer Policy to provide a more seamless process for student transfer. The policy guides the transfer of general education coursework among Kentucky's public postsecondary institutions. Revisions to the policy include:

- Changes to policy language to assure transfer students are given the same treatment as their native counterparts.
- Revisions to levels of general education certification to improve transferability of coursework at any stage in the student's academic career.
- Implementation of automatic transfer certification for all students and acceptance of certifications documented by the sending institution.

Changes to the policy and the enhanced process of certification are in effect for students transferring in spring 2005.

Access to transfer information is a key component of a successful statewide transfer system. Council staff and Kentucky Community and Technical

College System (KCTCS) representatives have developed TASK (Transfer Assistance for Success in Kentucky), a handbook for community and technical college students that provides detailed information on how to plan and execute a successful transfer. The handbook is currently available online through the CPE website.

In addition to TASK, representatives from participating institutions provided one-on-one training on the Course Applicability System (CAS) to KCTCS faculty and staff throughout the spring 2004 semester. CAS is an online transfer planning tool students can use to view degree programs, enter courses taken at their current institutions, and see how those courses fulfill degree requirements at the other institutions. Using this system, students will be able to plan their academic programs to align with statewide transfer agreements, guaranteeing successful transfer at any stage in their academic careers. The Council continues to work with non-participating institutions to achieve statewide implementation of CAS.

Access to baccalaureate degree programs is important for all students, including those in traditionally non-transfer degrees, such as the Associate of Applied Science (AAS). To facilitate degree attainment among AAS completers, the Council required the development of a completer degree on all university campuses. The degree allows graduates from any KCTCS associate degree program (including the AA, AS and AAS) to complete the baccalaureate in the normal number of hours required by the institution. The programs allow students additional routes to higher degree completion that do not penalize previous coursework taken in technically-based programs. All institutions are required to provide plans for the development of this degree by May 2005.

In addition to the completer degree, the Council continues to work with KCTCS and universities to develop 2+2 agreements that target students in applied associate programs. Each 2+2 agreement defines the coursework from a particular AAS degree that will transfer into a related baccalaureate program. KCTCS and Kentucky four-year institutions completed a 2+2 agreement for the AAS in Education–Teacher Preparation that allows students to transfer coursework to a four-year teacher preparation program with at least 60 hours of credit. Additionally, the Kentucky Virtual University (KYVU) offers online associate transfer degrees and is increasing the number of online 2+2 transfer frameworks. The programs increase access and ensure maximum transfer.

The Council and institutional representatives are collecting additional information on the issues affecting students' ability to pursue baccalaureate degrees that are not a part of statewide policies, including those related to financial need. Admissions counselors, registrars, academic affairs staff, and financial aid

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administrators of each public institution have convened statewide focus groups with the objective of identifying barriers to transfer and strategizing solutions for removing them. The Community and Technical College Student Survey (implementation fall 2004) will supplement the focus group data by providing student-based feedback. Data gathered through each of these activities will be used to inform the “next steps” in transfer planning.

Improving students’ understanding of the economic advantages of transfer is another goal of the Council and postsecondary institutions. The Council has distributed transfer brochures and posters to all of Kentucky’s public colleges and universities to encourage students to consider transfer options and help them better understand the programs. In addition, the new Go Higher Kentucky website hosts all of the transfer tools available to students and advisors including transfer promotional materials, the TASK handbook, and all transfer policy information.

Over the next year, the Council will continue to work on these projects and pursue a seamless system of transfer for Kentucky’s students. The following initiatives will be undertaken in 2004-05:

- Results of the statewide focus groups and the Community and Technical College Student survey will be used to identify additional barriers to transfer and develop statewide strategies for removing them.
- The Community College Feedback report will be provided to each college and university. The Council will facilitate institutional review of the reports and the alignment of two-year and four-year academic programs to improve transfer student success.
- The Council will continue to support the statewide implementation of the Course Applicability System and ongoing training for KCTCS students and faculty.
- The Council will work with institutions in the development of a completer degree on each campus.
- Promotion of transfer opportunities will continue. The Go Higher Kentucky website will serve as the “one-stop-shop” for transfer information for all students.

Seamlessness Policy Group

Three Council policy groups were established to focus on key postsecondary themes: seamlessness, affordability, and workforce/economic development. The Seamlessness Policy Group includes Council members and

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other policy makers interested in the development of policies that promote coordination and alignment across educational systems and provide opportunities for life-long learning. Over the past year, the group has focused on improving academic success by addressing barriers to successful transition at all levels of the educational system. The following describes the group's activities over the past year:

- Supporting the revised General Education Transfer Policy including language to improve the process of transfer.
- Monitoring the progress of the Course Applicability System (CAS) and developing strategies for statewide implementation. CAS is an online advising system that provides students with immediate access to course transfer information, thus reducing informational barriers to transfer. Eastern Kentucky University, Morehead State University, Murray State University, and the University of Kentucky currently are using the system. The Seamlessness Policy Group has encouraged all institutions to implement the system and continues to monitor progress toward statewide implementation.
- Sponsoring ongoing assessment of barriers to transfer. Council staff held statewide focus groups to identify transfer barriers and develop strategies to overcome these barriers. In addition, the Community and Technical College Student Survey (implementation fall 2004) will assess students' academic expectations and perceived barriers to baccalaureate degree attainment. The group will use the data collected from these projects to plan additional state-level transfer initiatives.
- Proposing a motion that the Council instruct all Kentucky public universities to submit within the next year a plan for creation of a completter degree. The completter degree allows graduates from any KCTCS associate degree program to complete the baccalaureate degree in the normal number of hours required by the institution. The Council approved the motion at its May 2004 meeting.

To further reduce barriers to degree attainment, the Seamlessness Policy Group has begun an investigation of off-site degree program offerings for students with limited access to college and university sites. The group reviewed the availability of these programs and will use this information as well as regional economic and workforce data to inform development of degree programs at extended campuses and through distance education.

In addition to focusing on the issues outlined above, the Seamlessness Policy Group is examining:

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- The impact of dual enrollment on postsecondary success for Kentucky students;
- The alignment of high school and adult education curricula with college and workplace expectations;
- Ways to increase postsecondary enrollment, retention, and degree production, including the role of distance learning in that effort;
- Strategies to reduce the achievement gap for low-income and minority college students.

Distance Learning

According to a spring 2003 Distance Learning Advisory Committee (DLAC) report, Kentucky has experienced substantial growth in the use of distance education since the 1997 *Postsecondary Education Improvement Act*. In 1996, Kentucky public postsecondary education institutions had 6,908 distance education enrollments in 420 courses. A total of nine undergraduate and seven graduate programs were delivered primarily using distance-learning technologies. By spring 2003, Kentucky public institutions offered more than 50 distance education programs and 1,809 courses, resulting in 25,337 enrollments.

Students from all 120 Kentucky counties, 37 states, and six foreign countries enrolled in distance education courses offered by Kentucky institutions. The courses were offered using a variety of delivery modes: print, audio, and video (132 courses), interactive television (738 courses), KET telecourses (83 courses), cable (6 courses), and the world-wide Web (850 courses). The report found that the use of distance education is increasing across the country and across the Commonwealth. All nine Kentucky public institutions and six of twenty-one independent institutions used distance education in fall 2002. In spring 2003 4.9 percent of all courses offered by public institutions were offered via distance education. Kentucky institutions are seeing increases in distance education utilization similar to those reported by peer institutions across the United States. The growth has been most dramatic in the online course area, but interactive television delivery has continued to be a strong delivery mode as well.

In addition, for-profit providers expect significant growth in Kentucky distance education enrollments. Capella University currently has 53 Kentucky online students and expects to enroll 350 in a broad range of programs by year 2008. DeVry University currently has 15 online students in Kentucky and is projecting 100 students in their business and information technology pro-

grams within four years. Finally, an increasing number of Kentucky students are enrolling in distance education programs such as those offered via SREB's Electronic Campus and Academic Common Market.

The report identifies several items in need of attention: improvement in data gathering and data collection processes to provide accurate and regular assessment of the quantity and use of distance education; improvement in the quality of student support services provided to those accessing postsecondary education through distance education; and better alignment of distance education offerings with ongoing analyses of critical state workforce needs. The report recommends a comprehensive review of distance education activity on a regular basis and a coherent set of policies that supports the goals of the postsecondary agenda. These recommendations are being implemented through the Distance Learning Advisory Committee.

The Distance Learning Advisory Committee

Created as part of the *Postsecondary Education Improvement Act* of 1997, the Distance Learning Advisory Committee identifies and proposes policy, goals, and actions to improve the operations of the Kentucky Virtual University (KYVU). DLAC voted in October 2003 to explore expanding its role and focus to include advising the Council on all forms of distance education provided by Kentucky's postsecondary education agencies and institutions. To guide DLAC in this deliberation the CPE staff was asked to develop an eLearning Strategic Framework to: 1) establish the vision for distance education methodologies and technologies and the role it should play in meeting institutional and system goals; 2) define the distance education policies, programming, support services, and infrastructure required to realize the eLearning vision of DLAC, and, (3) define the DLAC membership, structure, and relationships that are required to realize the eLearning vision.

The eLearning Strategic Framework

To ensure broad input and comment, an eLearning Steering Team established four workgroups (policy, programs, support services, and infrastructure). More than 70 individuals from Kentucky's postsecondary education institutions and agencies were involved in the process of developing and reviewing this resulting report: *Issues and Opportunity: The Kentucky eLearning Strategic Framework*. The report identifies collaborative opportunities and describes the distance education goals, initiatives, and needs of Kentucky postsecondary educa-

tion institutions and agencies. The report recommends the scope and focus of DLAC be expanded to address the coordination of policies, programs, support services, and infrastructure in support of distance education across all Kentucky postsecondary education institutions. The report also recommends that DLAC provide a forum for, and be an advocate of, distance education in Kentucky postsecondary education. For more information about DLAC and recommended areas of action, please visit www.kyvu.org/kyvu/dlac.asp.

The Kentucky Virtual University and Library

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The Kentucky Virtual University (KYVU), created with passage of the *Kentucky Postsecondary Education Improvement Act* of 1997, is a student-centered, technology-based system for coordinating the delivery of postsecondary education that meets the needs of citizens and employers across the Commonwealth of Kentucky. The KYVU consists of two major components: 1) a clearinghouse for quality distance learning opportunities provided by existing institutions both within and outside the state, primarily degree and certificate programs; and, 2) a single point of access to statewide student, library and academic support services.

The Kentucky Virtual Adult Education (KYVAE) website plays a pivotal role in expanding access to education and training, and facilitating a seamless transition from high school or GED programs to postsecondary education. The online curriculum allows adult learners to access quality curriculum, resources, and instructional support anytime, anywhere. In three years, KYVAE has revolutionized the way services are delivered to citizens, and thousands more are enrolling online as a result. Adults at lower literacy levels can improve their basic skills, while others can study for a GED or enhance their employability skills. KYVAE was honored with a National Association of State Chief Information Officers (NASCIO) recognition award for innovative use of technology in September 2003.

K-12 students can earn credit and access courses not available in their area through the Kentucky Virtual High School (KVHS), which partners with KYVU and local school districts. The KVHS offers 19 Advanced Placement classes and four years of foreign languages. Although primarily middle and high school students enroll, these courses are available to students in nonpublic schools and home schools as well.

The KYVU also helps high school students prepare for success in college. In 2003, KYVU partnered with the KVHS to develop programs responding to the federal requirements of the *No Child Left Behind Act*. Through this alliance, KYVU provides an online curriculum for K-12 students who may need supplemental educational services. Parents can select a KVHS teacher or a local teacher mentored by KVHS to deliver this curriculum. The KYVU also makes this online curriculum available to school districts that want to incorporate online learning into their established curriculum, GEAR UP Kentucky schools in particular. Currently, 46 K-12 students are being served. Next year, KYVU will align this curriculum to the Kentucky Early Mathematics Testing Program (KEMTP), which will allow students to hone their mathematical skills, identify weaknesses, and access specific modules in the online curriculum to increase their performance.

In addition to enhancing access and contributing to a more seamless educational system, the Kentucky Virtual University fosters efficiency, coordination, and collaboration among the state's postsecondary institutions and other education providers. KYVU has seen unprecedented growth in students served from 235 in the fall 1999 term to over 21,000 in the fall 2003 term. More than half are older than traditional college age; nearly two-thirds are women. Learners come from all 120 counties in Kentucky and include place-bound and time-bound adults; workers in business, industry, and government; P-12 students, teachers, and administrators; and traditional, residential college students. Enrollment in the not-for-credit courses offered within the KYVU infrastructure rose from 1,398 in the fall of 2002 to 10,399 in the fall of 2003, a 644 percent increase.

The Kentucky Virtual Library (KYVL) expands access to quality library and information resources to assist individuals learning, working, and living in the Commonwealth. The combined purchasing power of the KYVL has saved the Commonwealth an estimated \$5 million in acquisition costs. The KYVL illustrates what can be accomplished when diverse constituencies come together for a common good; all public institutional libraries, independent institutional libraries, public libraries, and K-12 libraries agreed to use a common library platform, leverage financial resources to purchase electronic databases, and support a statewide interlibrary loan initiative. Technical assistance and information about the KYVL is provided through a toll-free number staffed by the KYVU call center. KYVL members include 1,271 public K-12 schools, 118 public libraries, 38 postsecondary and special academic institution libraries, Kentucky Adult Education, and more than 20 special and independent K-12 libraries.

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For more information about KYVU and its sister organizations, visit www.kyvu.org.

Strategic Planning

In the spring of 2004, the Council began a comprehensive review of Kentucky's strategic agenda for postsecondary education as directed by HB 1. That legislation requires an update of the public agenda (the Council's *2020 Vision: An Agenda for Kentucky's System of Postsecondary Education*) every four years and the strategic implementation plan (the Council's *2001-06 Action Agenda*) every two years.

The Council staff held a series of meetings in April, May, and June with institutional presidents and other campus leaders, executive branch officials, legislative staff, and Council members to seek advice on the design of the planning process. These discussions were focused on defining the objectives, key partners, deliverables, and timelines. The outcomes are summarized below:

Objectives

- Assess the current status of postsecondary education and its contributions to addressing state needs since 1998;
- Establish what postsecondary education needs to do now to improve the standard of living and quality of life of Kentuckians, taking into account new challenges facing the Commonwealth;
- Determine what it will take for the system to perform at expected levels; and
- Set new goals, objectives, and benchmarks for the next four years—both at the state level and for individual institutions.

Key Partners

Policy makers, students and parents, small and large businesses, labor groups, the elementary and secondary community, economic development entities, non-profit and community leaders, faculty and staff of the public and independent colleges and universities, institutional alumni and governing boards, local P-16 councils, and concerned citizens are participating in the process. A series of public forums was held across the state to discuss the needs of Kentucky and what the postsecondary community can do to respond.

Deliverables

At the end of the process, the Council will have completed the following:

- **Current Assessment** – A comprehensive analysis of the current condition of educational attainment, income levels, and other demographic and economic indices, including trends, forecasts, and national comparisons.
- **Enrollment Projection and Impact Analysis** – An estimate of what is needed for Kentucky to reach the national average on a variety of indicators by 2020. More specifically, the analysis will address the following questions:
 - How many students will be in the system by 2020 if Kentucky achieves its goal of being at or above the national average in educational attainment?
 - Does Kentucky currently produce enough degrees annually to close the gap by 2020? How many more degrees (by level) need to be produced above and beyond the current level of production? What increases in enrollment, retention, and graduation are needed?
 - If these projections and goals are achieved, what impact will they have on Kentucky's per capita income and tax base?
- **Public Agenda** – A publication suitable for multiple audiences, including campus communities, education partners, local community groups, and current and potential employers. The public agenda will focus broadly on the needs of the Commonwealth by describing how Kentucky's postsecondary education system can contribute to the creation of good jobs, the development of a skilled workforce, and the continuing development of an educated, engaged citizenry.
- **Action Plans** – Documents outlining what the public and independent institutions, the Council, adult education, and KYVU will do to implement the public agenda and further the six goals of HB1.
- **Key Indicators of Progress** – The key indicators of progress were streamlined in 2003-04 and will be re-evaluated as part of the strategic planning process. The revised key indicators will reflect the objectives identified in the Public Agenda and the projections and goals established through the Enrollment Projection and Impact Analysis.

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Timelines

The first phase of strategic planning (April-August 2004) includes the Current Assessment and Enrollment Projection and Impact Analysis.

The second phase of strategic planning (September 2004-March 2005) includes discussions with the public (through a number of regional forums), the analysis of forum results, and drafts of the public agenda, to be approved by the Council in March 2005.

The final phase (February – August 2005) includes discussions with institutional leaders, faculty, and staff, which will set the stage for the development of campus action plans. Parameters also will be developed to guide institutions through a mission review process. Concurrently, the Council and its units (CPE, KYVU, and adult education) will develop action plans.

The process will culminate in the publication of the revised public agenda and institutional and Council action plans for initial distribution at the 2005 Trusteeship Conference.

Funding Adequacy

This section of the report examines how well Kentucky's postsecondary education system is funded from three perspectives: 1) funding adequacy relative to the achievement of HB 1 goals, 2) the funding adequacy of the system at current enrollment levels relative to how well other states fund their postsecondary education systems, and 3) the adequacy of funding for each institution compared to like institutions across the nation.

Funding House Bill 1 Goals

The first perspective focuses on the cost of increasing Kentucky's educational attainment levels to at least the national average by 2020 to allow Kentucky to successfully compete in the knowledge-based economy. This view supports the assumptions outlined in the postsecondary education reform agenda that the key to economic prosperity, an increased standard of living, and improved quality of life is advanced education.

While institutional operating appropriations represent the base funding needs of the system, there are many other costs associated with having an adequately funded system of postsecondary education. Kentucky is among a handful of states that have invested in a focused way in research, science and technology, adult education, and workforce development. The strategic trust

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funds have been the primary mechanism for targeting this investment, even during recent years of fiscal austerity. Over the past three biennia the state has appropriated \$350 million for endowments at Kentucky's public universities in support of research and excellence. Dollar-for-dollar institutional matches through private donations bring that total to \$700 million. The endowments produce interest earning, which the universities use to support their research agendas. In addition to the trust funds created by HB 1, the legislature has funded other important strategic initiatives such as the adult education and literacy program and the science and technology program.

The Council's budget recommendation for the 2004-06 biennium includes \$378 million in state-supported bonds to construct new space and renovate existing facilities. In addition, the Council's budget request includes \$10 million (which only covered a small portion of the need) for projected enrollment growth, \$73 million in funds for Bucks for Brains and related programs, and additional funds for merit-based and need-based student financial aid programs. Increased competition for state revenues from other important programs, coupled with concerns about the impact of tuition increases on access to educational opportunities, makes the identification of the financial and operational requirements of achieving the goals of HB1 even more of an imperative in the future.

Funding Research and Development – One of the Council's five questions for measuring progress on postsecondary education reform is Question 5: Are Kentucky's communities and economy benefiting? A key metric the Council monitors is research and development expenditures, as measured by the National Science Foundation.

This metric represents an important policy issue, particularly for the University of Kentucky in its quest to achieve top-20 public research university status and for the University of Louisville in its goal to become a nationally recognized metropolitan research university. According to the most recent data (federal fiscal year 2002) published by the National Science Foundation, the University of Kentucky ranked 36th among all public universities and colleges in total research and development expenditures (\$236.3 million), while the University of Louisville ranked 85th (\$87 million). To put the UK and UofL research and development numbers in perspective, in that same year the leading University of Kentucky peer benchmark institution in the research and development arena, the University of California at Los Angeles, had research and development expenditures totaling \$787.6 million, while the leading University of Louisville peer benchmark institution, the University of California at San Diego, had research and development expenditures totaling \$585 million.

Kentucky is among a handful of states that have invested in a focused way in research, science and technology, adult education, and workforce development.

Another way to view the UK and UofL numbers is to understand that the *average* total research and development expenditure amount for a top-20 public university or college in federal fiscal year 2002 amounted to about \$468 million, while the *average* for a top-100 institution amounted to about \$222 million. As these data indicate, while both the University of Kentucky and the University of Louisville have been making substantial progress in enhancing their respective research and development enterprises (see chapters in this report addressing progress made on HB 1 goals 2 and 3), major public research institutions nationally have been doing likewise, many at an accelerated pace. Consequently, a continued state investment in research and development activities and infrastructure will be necessary to achieve HB 1 goals.

Continuing to make progress on research and development-related metrics is vitally important to help advance Kentucky's economy. The R&D work of Kentucky's public four-year institutions, and in particular its two research institutions, is essential to the postsecondary education reform agenda's ultimate goal of improving the lives of Kentuckians. Research and development will help further Kentucky's intellectual enterprise and, in turn, spur the building of business ventures. This enhanced economic activity will result in higher incomes and an improved quality of life for the citizens of the Commonwealth.

According to the most recent data (federal fiscal year 2002) published by the National Science Foundation, UK ranked 36th among all public universities and colleges in total research and development expenditures (\$236.3 million) while UofL ranked 85th (\$87 million).

Funding Regional Stewardship – Kentucky postsecondary reform has made considerable progress in both enrollment growth and the expansion of research and development. However, a third dimension of postsecondary effort is vitally important to the Commonwealth's economic and social progress but has received far less attention since the passage of HB 1. Referred to as “regional stewardship,” this involves postsecondary institutions working with their regions and local communities on such challenges as strengthening economic development, improving P-12 education, supporting local government effectiveness, improving healthcare access, and strengthening the non-profit sector.

While Kentucky provides resource streams that support both instruction and research, little is provided to support this third dimension of postsecondary effort, which regions and communities indicate is vitally important. Clients for these services often include school districts, small businesses, local governments, and non-profits, most of which cannot afford to pay full cost. The result is that colleges and universities either do not provide the services or they absorb the lion's share of the cost.

The Council has proposed a Regional Stewardship initiative as a method of funding projects and services that are important to regional economic and

social progress, build on postsecondary expertise, and involve a strong community partnership. It requires institutions to be accountable for the use of these funds and to document their impact on the challenges they address. This Regional Stewardship initiative, believed to be the first of its kind in the nation, is intended to harness the full capacity of our colleges and universities to drive the future of the Commonwealth, not only through enrollment growth and high impact research, but also the application of professional expertise to the needs of regions and communities.

State Level Comparisons

State Appropriations – This section refers to commonly used measurements to compare Kentucky’s fiscal or tax effort with that of other states. Differing budgetary structures limit the comparability of the data. This issue will be addressed later in this report. Tax effort is defined as the extent to which a government uses its fiscal or tax capacity to support postsecondary education. *Grapevine*, a well-known higher education funding analysis report published by Illinois State University, provides one national indicator. *Grapevine* reports data on the total effort for higher education, including state appropriations for universities, colleges, and community colleges in each state, as well as state higher education agencies.

One of the key data elements of *Grapevine* is the ranking of states on appropriations of state and local tax funds for operating expenses of higher education. These *Grapevine* data are important indicators of “ability to pay” and reflect policy priorities in the various states’ budget processes. Per capita personal income, perhaps the broadest measure of states’ economic well being, is an extremely significant metric when analyzing state fiscal policies.

For fiscal year 2002, *Grapevine* reported the following data for Kentucky compared to national averages and other states. Since last year’s report, there is no new data on this metric.

**Rankings of States on Appropriations of
State and Local Tax Funds for Operating Expenses of Higher Education per
\$1,000 of Personal Income and Per Capita, FY 2002**

	Per \$1,000 of Income	Rank Among the States	Per Capita	Rank Among the States
Kentucky	\$10.65	10	\$266.75	16
National Median	\$8.51		\$246.77	

The following list represents the states that ranked above Kentucky when comparing state and local appropriations for operating expenses of higher education per capita:

The Council has proposed a Regional Stewardship initiative as a method of funding projects and services that are important to regional economic and social progress, build on postsecondary expertise, and involve a strong community partnership.

1. Wyoming	\$383	9. Iowa	296
2. New Mexico	364	10. Wisconsin	288
3. Nebraska	336	11. Hawaii	285
4. California	328	12. Mississippi	282
5. Alaska	322	13. Illinois	280
6. Kansas	320	14. Minnesota	278
7. North Dakota	317	15. Utah	268
8. North Carolina	313	16. Kentucky	266

The following list represents the states that ranked above Kentucky when comparing state and local appropriations for operating expenses of higher education per \$1,000 of personal income:

1. New Mexico	\$15.78
2. Wyoming	13.39
3. Mississippi	13.10
4. North Dakota	12.11
5. Utah	11.60
6. North Carolina	11.32
7. Nebraska	11.25
8. Kansas	11.07
9. Iowa	10.90
10. Kentucky	10.65

As previously indicated, these rankings demonstrate that Kentucky has made an above-average effort to provide operating funds to its postsecondary education system despite being a relatively poor, relatively small state.

Kentucky's per capita personal income currently stands at about 84 percent of the national average, ranking 41st per updated 2003 data. In terms of population growth, Kentucky grew by only .6 of a percent during the 1980s. Even though in the decade of the 1990s Kentucky's population grew more rapidly (approximately 9 percent), it still trailed the national growth rate. According to the 2000 Census, Kentucky ranked 25th in total population.

Since last year's report, the State Higher Education Executive Officers (SHEEO) organization published a higher education finance report, *State Higher Education Finance 2003*. Among many other financial issues addressed in the report are a number of new data on interstate comparisons of public postsecondary education systems, focusing on state appropriations on a per full time equivalent (FTE) student basis. Of particular interest, this report high-

lights total educational funding changes on a per FTE basis, by state, over the period FY 1991-2003. During this time, Kentucky increased its total postsecondary education funding by \$1,861 per FTE, the fourth highest nominal dollar change in the nation.

It should be noted that differing budgetary structures among the various states raise some questions about both the *Grapevine* and the SHEEO interstate funding comparisons. For example, state appropriations for new economy programs, adult education, and technical colleges are not necessarily counted as postsecondary education appropriations in other states, while they are part of postsecondary education appropriations in Kentucky. These structural differences in reporting postsecondary education data may distort the relative rankings of the states. Also, the time period focused on in the SHEEO document coincided with major growth in Kentucky's postsecondary education state appropriations resulting from two key state-specific events: 1) the restoration of Kentucky's significant higher education state budget cuts from the early 1990s, and 2) investments related to the Commonwealth's financial commitments to postsecondary education under the *Postsecondary Education Improvement Act* of 1997, including significant increased funding for student financial aid programs. In addition, the time period covered by the report does not include planned fiscal year 2004 and 2005 postsecondary education budget cuts totaling approximately \$64 million. The Grapevine and SHEEO data reflect above average effort by Kentucky to provide operating funds to its postsecondary education system. The results achieved from these investments have been impressive. Thanks to these investments, Kentucky postsecondary education has come a long way, but it has a long way to go to achieve the goals of HB1. The challenge facing us now is sustaining and building upon the momentum that has been established.

College Affordability

Another feature of state level comparisons is the affordability issue, i.e., how affordable postsecondary education is for Kentucky's students and their families. The National Center for Public Policy and Higher Education's *Measuring Up 2004* report uses six indicators to grade the 50 states on affordability. The indicators are ability to pay (three indicators), state need-based aid, low-priced colleges, and student debt. Despite Kentucky receiving its lowest overall grade (D) in affordability, only three states received higher letter grades: California (B), Minnesota (C), and Utah (C). No state received an A, and thirty-six states received an F.

Within the affordability category, Kentucky performed particularly well on *Measuring Up's* “ability to pay” indicators. *Measuring Up* defines ability to pay as the share of family income needed to pay for tuition, fees, room and board, and other college expenses, minus student financial aid.

Percent of Income (Average of All Income Groups)
Needed to Pay for College Expenses Minus Financial Aid

Family Ability to Pay	KY 1994	KY 2004
At Community Colleges	21%	21%
At Public Four-Year Colleges/Universities	22%	22%

Kentucky students, on average, have relatively low student borrowing amounts. There are only seven states (North Dakota, Mississippi, Iowa, South Dakota, Wyoming, Michigan, and New Mexico) where students borrow less.

As noted in the chart, the percent of family income required to finance college in Kentucky, at both the two-year and four-year levels, remained unchanged over the past ten years. Another indicator of affordability is student borrowing. Again, according to the *Measuring Up 2004* report, Kentucky students, on average, have relatively low student borrowing amounts. There are only seven states (North Dakota, Mississippi, Iowa, South Dakota, Wyoming, Michigan, and New Mexico) where students borrow less.

In contrast, while Kentucky’s performance on the state need-based indicator has improved significantly over the decade, it continues to lag behind the performance of top states. In Kentucky, the financial aid low-income students receive from the state is 40 percent of the federal Pell grant aid. However, in *Measuring Up's* top states students receive more need-based aid from state sources than federal resources.

It should be noted that most of the data reported in *Measuring Up 2004* are from 2003, the most current information available that allows for state-by-state comparisons. *Losing Ground*, a report published in 2002 by the National Center on Public Policy and Higher Education, indicates that in recent years families across the nation continue to find college less affordable as tuition rates increase and financial aid programs lose their buying power.

The Council has established several policy groups to provide a more thorough analysis of important issues related to postsecondary education reform in Kentucky and to make policy recommendations regarding these issues. One of these groups is the Affordability Policy Group, which convened November 2003. The work of this policy group addresses issues such as tuition policy, financial aid policy, and access for Kentucky’s students. This will span the 2004-06 biennium and will help to guide the development of the Council’s 2006-08 biennial budget recommendation for the postsecondary education system.

Institutional Comparisons

During FY 2004, the Council staff initiated a comprehensive review of its funding model. This process commenced May 2004, based on specific principles (inclusivity and objectivity, simplicity, temporary until final, benchmarks review, and mission) and objectives (policy coordination, adequacy and equity, and accountability) adopted by the Council in July 2004.

This comprehensive funding review process has included the institutional chief budget officers, the presidents of the institutions, staff of the Office of State Budget Director, staff of the Education Cabinet, staff of the Legislative Research Commission, and Council staff. In addition, five workgroups have been established to facilitate the review process: 1) base funding model, 2) performance/accountability, 3) funding distribution methodology, 4) capital, and 5) trust funds.

As a result of the efforts of these work groups and other stakeholders, the Council staff will be able to present recommendations for changes to the current benchmark funding model during calendar year 2005. These recommendations will address five major issue categories: 1) benchmark selection, 2) tuition deduction, 3) performance funding, 4) capital construction projects, and 5) funding distribution methodology. Given the nature of this work in progress, it will not be clear until later in calendar year 2005 what institutional funding gaps may exist as a result of the new benchmark funding model. As a point of reference, for the 2002-04 biennium Kentucky's aggregate institutional funding gap, based on previous institutional benchmarks, was \$146 million while for the 2004-06 biennium that gap grew to \$315 million.

The analysis, which resulted in the \$315 million funding gap, differs from the SHEEO funding analysis in the following four ways: 1) the benchmark model considers only public funds available to each university as operating funding (the SHEEO report considers all educational funding including statewide financial aid, trust funds, and other educational agencies); 2) the comparison in the benchmark model is to a small number of selected institutions and not statewide averages; 3) the benchmark model does not adjust for cost of living since statewide averages do not accurately account for particular institutional economies; and 4) the standard tuition deduction in the benchmark models estimates tuition and fee dollars differently.

The Other Major Revenue Source: Tuition and Fees

Any discussion of funding adequacy for institutions needs to address the

Losing Ground, a report published by the National Center on Public Policy and Higher Education, indicates that in recent years families across the nation continue to find college less affordable as tuition rates increase and financial aid programs lose their buying power.

matter of what Kentucky's students pay. As the table below indicates, the relative share of the public funds revenue to educate students has increasingly tilted toward tuition revenue and away from state General Fund appropriations. Tuition's share of total public funds has increased from less than 31 percent in FY 1999 to close to 42 percent in FY 2004.

	1999				2004			
Institution	Tuition/Fees Revenue	State Appropriation	Total Public Funds	Percent Tuition/Fees of Public Funds Total	Tuition/Fees Revenue	State Appropriation	Total Public Funds	Percent Tuition/Fees of Public Funds Total
EKU	\$35,791,900	\$63,791,500	\$99,583,400	35.94%	\$48,583,600	\$71,448,100	\$120,031,700	40.48%
KCTCS	51,589,900	158,683,900	210,273,803	24.53%	97,078,200	184,747,600	281,825,800	34.45%
KSU	6,423,900	20,364,100	26,788,000	23.98%	11,425,900	22,286,600	33,712,500	33.89%
MoSU	21,102,600	38,812,500	59,915,100	35.22%	31,880,900	41,599,300	73,480,200	46.98%
MuSU	26,014,000	46,753,300	72,767,300	35.75%	44,454,000	50,179,100	94,633,100	42.74%
NKU	35,481,000	34,642,000	70,123,000	50.60%	64,969,600	45,127,300	110,096,900	59.01%
UK	99,937,000	279,569,000	379,506,000	26.30%	142,305,700	293,541,000	435,846,700	32.65%
LCC	9,773,200	6,955,800	16,729,000	58.40%	14,950,500	9,054,500	24,005,000	62.28%
UofL	67,009,000	160,345,000	227,354,000	29.47%	105,036,400	171,859,400	276,895,800	37.93%
WKU	36,066,600	58,072,500	94,139,100	38.31%	64,444,000	68,811,500	133,255,500	48.36%
TOTAL	\$389,189,100	\$867,989,600	\$1,257,178,703	30.96%	\$625,128,800	\$958,654,400	\$1,583,783,200	41.90%

Looked at another way, over the five-year period from FY 1999 through FY 2004, while state appropriations increased by about 10 percent, tuition and fees revenue increased by about 60 percent. It should also be noted that enrollments at the institutions have grown significantly since the reform efforts began. Therefore, general fund appropriations per FTE student declined by 8.3 percent from 1999 to 2004. Overall, total public funds (general funds plus tuition revenue) increased by only 4.5 percent per FTE student during this same period.

**Kentucky Public Postsecondary Education Institutions
FY 1999-2004**

Revenue – Total	1999	2004	Percent Change
Tuition and Fee Revenue	\$389,189,100	\$625,128,800	60.1%
State Appropriations Revenue	\$867,989,600	\$958,654,400	10.4

Revenue –Total Per FTE Student	1999	2004	Percent Change
Tuition and Fees	\$3,217	\$4,288	33.3%
State Appropriations Revenue	\$7,175	\$6,576	-8.3%
Total Public Funds	\$10,392	\$10,864	4.5%

For decades, it has been state policy to finance postsecondary education opportunities primarily through common tax support at or above average tax effort to maintain low student tuition. Thus, as indicated by these data, Kentucky ranks comparatively high in tax effort. By contrast, Kentucky is widely acknowledged to rank relatively low in average tuition and fees charged to the student. In this respect, Kentucky's fiscal structure for financing postsecondary education is similar, for example, to the states of North Carolina and California. Despite the success of this long-standing postsecondary education fiscal policy, a major shift has taken place in the last few years, essentially substituting revenues traditionally generated through common tax support for revenues generated from students. If this trend continues for any length of time, it will negatively impact both access to educational opportunities and progress toward the achievement of HB1 goals.

Next Steps

In 1998, the Council asked the RAND Corporation to conduct an analysis of Kentucky's postsecondary education enrollments to determine how many additional students the Commonwealth needed to enroll by the year 2020 to be above the national average in educational attainment and college-going. The result of that study indicated that Kentucky's 1998 total undergraduate enrollment number, about 160,000 students, would need to increase by about 50 percent, to 240,000, or an additional 80,000 undergraduates. Given Kentucky's success in enrolling more students during the first six years of reform, the Council revised its enrollment goals in 2001, projecting that the system would reach the goal of 80,000 additional students by 2015 instead of 2020.

Currently the Council is updating that analysis and expanding its scope to address the following questions:

1. How many more degree holders in Kentucky's adult population will be needed to be at the national average in educational attainment by 2020? What increases in enrollment, retention, and graduation rates will be required to reach this goal?
2. If these goals are achieved, what impact will they have on Kentucky's personal income and state tax revenue?
3. What additional investments in the postsecondary system will be required to implement these and other reform goals, including affordability, research, and technology transfer?

Enhanced Economic Development and Quality of Life

Increasing the educational attainment of Kentucky's workforce is vital to the state's future economic development and the ability to compete successfully in the knowledge economy. Colleges and universities play an important role in training the current and future workforce and building and sustaining research and development capacity. As ideas generated from university research are commercialized, Kentucky will require a highly motivated, well-educated workforce. Kentucky also needs to create a thriving, entrepreneurial climate.

Indicators Related to Economic Development

As ideas generated from university research are commercialized, Kentucky will require a highly motivated, well-educated workforce. Kentucky also needs to create a thriving, entrepreneurial climate.

- Data released by the National Science Foundation in July 2004 show that combined extramural research and development expenditures at UK and UofL rose from \$220 million in 2002 to \$250 million in 2003, exceeding the goal of \$230 million. The goal is to reach \$1 billion in combined expenditures by 2020.
- Federal research and development expenditures for UK and UofL rose from \$139 million in 2002 to \$160 million in 2003, exceeding the goal of \$143 million.
- As part of its strategic plan for a knowledge economy, the Kentucky Innovation Commission has identified five research priority areas:
 - Human Health and Development
 - Biosciences
 - Materials Science and Advanced Manufacturing
 - Information Technologies and Communications
 - Environmental and Energy Technologies

In 2003-04, endowments in these research priority areas rose to \$399 million.

Initiatives to Enhance Economic Development

"Bucks for Brains" Endowment Match Program

The Endowment Match Program matches state dollars with private donations to encourage research at UK and UofL and to strengthen key programs at Kentucky's comprehensive universities. All funds, both public and private, must be endowed, which provides a perpetual source of funding for

research-related activities. Interest revenue on endowment proceeds can be used for endowed chairs, professorships, research scholars, research staff, fellowships, scholarships, research infrastructure, and mission support at the public universities.

The General Assembly has appropriated a total of \$350 million to this endowment program over the past six years. Of that amount, \$300 million was allocated to the two research universities, and \$50 million was allocated to the six comprehensive institutions. There have been three rounds of funding for the program: \$110 million in 1998-2000, \$120 million in 2000-02, and \$120 million in 2002-04. Once the institutions have fully matched their 2002-04 allocations, a total of \$700 million will be dedicated to the endowments of Kentucky's public universities.

During 2003-04, Kentucky's public universities added \$49.8 million in cash gifts and state funds to their endowments through the Endowment Match Program. These funds supported the creation of nine new endowed chairs and 25 new endowed professorships during the fiscal year, as well as multiple fellowships, scholarships, and mission support programs. Overall, between 1997 and 2004, the number of endowed chairs at all institutions increased from 55 to 187 (240 percent), and the number of endowed professorships increased from 53 to 261 (393 percent).

Bucks for Brains has helped public universities attract quality researchers dedicated to advancing knowledge, developing products, building businesses, and improving the health and well-being of Kentucky's citizens. The program also has aided universities' efforts to attract federal research dollars to Kentucky. Between 1997 and 2002, federal research and development expenditures at Kentucky's research institutions increased from \$75.6 million to \$139.4 million, or by 84.4 percent. Over that same period, extramural research and development expenditures increased from \$105.2 million to 220.4 million, or by 109.5 percent.

A fourth round of Bucks for Brains was requested for 2004-06 totaling \$61 million—\$50 million to be divided between UK (2/3) and UofL (1/3), \$10 million among the comprehensive universities, and \$1 million for KCTCS. The Council also requested \$217.9 million in construction to support Bucks for Brains faculty and other research programs.

HB 572 Knowledge Economy Programs

The *Kentucky Innovation Act* (KIA) was created by the 2000 General Assembly through HB 572 to provide a knowledge economy blueprint for Kentucky,

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with four new programs administered by the Council. The Council has entered into annual contracts since 2001 with the Commonwealth through the Kentucky Science Technology Corporation (KSTC) to create, manage, and develop various KIA programs. The legislation created research and development support programs and provided the necessary fiscal stimulus to create, attract, incubate, and grow high-tech and biotech firms in Kentucky. These programs, combined with two already in existence, provide Kentucky's knowledge economy infrastructure.

The Commercialization Investment Funds (CIF) are a series of pre-seed and seed stage capital funds aimed at promoting and developing early stage technology companies in Kentucky. There are four funds within CIF:

- The Research and Development Voucher program is a \$3 million per year investment fund that enables small and medium-sized Kentucky-based firms to undertake research and development partnerships with Kentucky universities. Twenty-seven companies have received \$3.7 million since the program began.
- Regional Technology Corporations (RTC) was designed to support clusters of knowledge-based businesses, primarily in rural areas of Kentucky. In 2002, the RTCs were recreated as satellites to innovation and commercialization centers, renamed ICCs, and managed by the Office for the New Economy. Since 2002, this early concept pool has eight investments totaling nearly \$200,000.
- The Rural Innovation program is a \$1 million annual investment fund that assists small, rural, Kentucky-based firms to undertake research and development. Funds must be used in partnership with a university or an appropriate third party. One hundred twelve Kentuckians have received more than \$1.5 million in rural investment funds since the program began.
- The Commercialization Fund manages \$750,000 per year that can be invested in university faculty to translate their research into marketable products. Since 2002, 17 faculty have received over \$1 million for intellectual property commercialization.

The Kentucky Innovation Act (KIA) created research and development support programs and provided the necessary fiscal stimulus to create, attract, incubate, and grow high-tech and biotech firms in Kentucky.

The General Assembly directed the Kentucky Science and Technology Corporation (KSTC) to create and manage the Kentucky Science and Engineering Foundation (KSEF) as a means to increase Kentucky's capacity to become a lead state in competitive research. KSEF invests in peer-reviewed science and engineering research and attracts more research funding from all sources to the Commonwealth. Also, it builds research and development excellence in the

Commonwealth, particularly in Kentucky's priority research areas. KSEF has made 137 awards totaling over \$5.9 million.

The mission of Kentucky EPSCoR Program is to enhance the research and intellectual capacity of universities and colleges to enable Kentucky to excel in federal R&D funding competitiveness. EPSCoR was created in 1978 in response to congressional concern over the inability of some states to compete for federal research and development grants and contracts. Kentucky began participating in the program in 1986. Since that time, scientists and engineers at the universities have received awards from all major federal agencies with EPSCoR programs. Since 2002, Kentucky EPSCoR has funded 266 research projects and infrastructure grants totaling \$9.7 million, and it has brought in \$51.4 million non-state matching funds.

Consistent with the priority focus areas established by the state, KSTC has invested funds under the Commercialization Investment Funds and the Kentucky Science and Engineering Foundation (KSEF) exclusively in the areas of biosciences, environmental and energy technologies, human health and development, information technologies and communications, and materials science and advanced manufacturing. A searchable database of all awards by university, by region, and by funding program is available online at www.kstc.com. Cumulatively there have been 557 investments in the knowledge-based economy totaling \$22.2 million, and leveraging \$60 million in non-state investments.

Workforce/Economic Development Policy Group

The Council established the Workforce/Economic Development Policy Group in November 2003 to examine key issues including:

- Areas of knowledge and competency needed to compete in the current and emerging workplace;
- Policies and strategies necessary to attract students into high demand jobs, anticipate and respond to changing educational demands, prepare workers in the state's shortage areas, provide educated Kentuckians for the workforce, and support Kentuckians who create their own businesses;
- Partners' roles and responsibilities in providing educational opportunities to workers;
- Goals and performance indicators appropriate for partners to ensure a high-performance, high-quality workforce and education system;
- Enhanced economic and educational effectiveness of Bucks for Brains and its links to research and development and commercialization programs and funding;
- Labor market projections.

Since 2002, Kentucky EPSCoR has funded 266 research projects and infrastructure grants totaling \$9.7 million, and it has brought in \$51.4 million non-state matching funds.

The Policy Group has worked with Dr. Paul Coomes and Ron Crouch from the University of Louisville to gather and analyze data labor market trend data and evaluate whether Kentucky is producing enough certifications and degrees in high demand areas such as engineering, health care occupations, and teaching. The Policy Group also is reviewing population migration data, which reveals that Kentucky in recent years has experienced a net gain in under-educated citizens (a high school degree or less) and a net loss of young adults with a bachelor's degree or higher. The Policy Group is evaluating a number of strategies to address these issues including strengthening postsecondary/workforce partnerships; supporting entrepreneurial ventures and commercialization of research; renewing state support for university-based research activities; and targeting efforts to encourage students to pursue degrees in high demand/high priority areas.